LAW OFFICE OF MARC CHYTILO, APC

ENVIRONMENTAL LAW

August 24, 2018

Supervisor Das Williams, Chair
Santa Barbara County Board of Supervisors
105 E. Anapamu Street
Santa Barbara, California 93101

RE: Appeal of the Feldman New Residence at 755 Sand Point Road

Chair Williams and Supervisors,

This office represents Raemer Crest, LLC and Brilliant Projects, LLC, owners of lands on Sand Point Road, and Appellants in this matter. The Feldman New Residence Project (Project) is located on a narrow sand spit located between Carpinteria Slough (aka Carpinteria Salt Marsh or El Estero) and the Pacific Ocean, which is unusually vulnerable to coastal and fluvial hazards. The Project would entail demolition of the existing 1,774 square foot residence, and construction of a new substantially larger residence - which together with the lower level "storage area" and attached garage totals 13,130 square feet – an approximate 740% increase in structural development on the 1.15 acre site and requires a discretionary Modification for tall Project elements. This new residence is incompatible with the scale and character of the existing community, inconsistent with applicable Local Coastal Program (LCP) and Coastal Act policy, and may result in significant adverse impacts to the environment including impacts to biological and cultural resources, and cause impacts tied to increased coastal and fluvial hazards including flooding and water resource impacts.

The Mitigated Negative Declaration (MND) for the Project badly understates the significance of Project impacts. Since the MND's initial preparation, conditions in the Carpinteria Salt Marsh have changed considerably by virtue of the Thomas Fire and subsequent catastrophic debris flow. Updated FEMA maps, depicted and discussed in attached report from coastal hazard expert David Revell, Ph.D., show that sediment deposited in Carpinteria Salt Marsh post 1/9/18 raised the base elevation within the Marsh, which in turn increases both the fluvial hazards to the proposed development and increases the vulnerability of Environmentally Sensitive Habitat Areas (ESHAs) affected by the Project including the Carpinteria Salt Marsh and an on-site wetland, and the sensitive and endangered species that rely on those habitat areas.

Mr. Revell and biologist Michael Gonella, Ph.D. reviewed the MND and relevant Project technical reports and found them lacking in numerous respects. Letters from these experts, submitted as Attachments 1 and 2 to this letter, include substantial evidence of the Project's potentially significant environmental impacts. The California Environmental Quality Act (CEQA) dictates that where such substantial evidence exists, the agency must prepare an Environmental Impact Report (EIR). We respectfully request that the Board grant our appeal and direct preparation of an EIR.

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In addition to the above CEQA grounds, the Appeal should also be granted as the required Findings of Approval cannot be made because the Project site is not in compliance with County and Coastal Commission rules and regulations due to the presence of an unpermitted rock revetment that is currently being studied for removal or relocation, and because the Project is inconsistent with the County's certified LCP and the Coastal Act. We request that the Board grant our appeal based on an inability to make these required findings, and direct the Applicant to revise their proposal to conform with applicable policy once the Project Description for the revetment remediation project is complete.

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The following is an overview of substantial evidence precluding approval of the Project and adoption of the MND due to the potential for significant adverse impacts and inconsistencies with applicable coastal policies, Coastal Act provisions, and County coastal zone regulations:

- The Revell Coastal technical report prepared by coastal hazard expert David Revell, PhD., identifies serious flaws and omissions in the Streamline West Sea Level Rise Report that preclude an accurate characterization of future conditions and assessment potential project impacts, and concludes **"[t]he Project's unusual vulnerability to both coastal hazards and fluvial hazards creates a reasonable possibility that the Project will result in significant environmental impacts."** (Revell Coastal Report, 8/24/18, pp. 1-2 (attached hereto as Attachment 1).)

- Considering best available science on coastal and fluvial hazards likely to occur during the Project's 75-year lifespan, the Revell Coastal Report finds: **"The wetlands and beaches as sea level rises will need to trangress (move up in elevation and inland). This development, particularly the western portion, will reduce the ability of the salt marsh habitats to trangress and evolve leading to an impact to ESHA."** (Revell Coastal Report, 8/23/18, p. 6 (Attachment 1).)

- The technical report prepared by biologist Michael Gonella, PhD. identifies serious flaws and omissions in the MND's analysis and mitigation of biological resource impacts, and **identifies potentially significant impacts to the on-site wetland from construction and structural development associated with the Project, including potentially significant impacts to federally endangered Saltmarsh bird's-beak** (*Cordylanthus maritimus* ssp. *maritimus*). (Gonella Biological Report, 8/23/18, p. 3-4 (Attachment 2).)

- The unresolved status of the unpermitted rock revetment precludes accurate modeling of the site, and precludes the Board from making the required finding of approval that the Project site is in compliance with all rules and regulations. (Revell Report, p. 7; *see* Coastal Commission Letter on Unpermitted Revetment, August 27, 2015)

- Inconsistencies with applicable coastal policies including CLUP policies and Coastal Act provisions protecting ESHA and watersheds, maintaining a 100-foot wetland buffer, and protecting against flooding and coastal hazards. (*See* Coastal Commission letter, 2/15/18, p. 3 (identifying potential inconsistencies with CLUP Policies 2-11, 3-19, and 9-9, and Coastal Act Sections 30239, 30231, and 30240.)

1) The Administrative Findings Required for CDP Approval Cannot Be Made

Administrative approvals such as the Feldman New Residence must be accompanied by administrative findings supporting the conclusion that all requirements for the approval have been satisfied. (*See Topanga Ass'n for a Scenic Community v. County of Los Angeles* (1974) 11 Cal. 3d 506, 511). These required findings must support the approval, and substantial evidence in the record must support the findings. (*Id.*, Cal. Code Civ. Pro. § 1094.5). The specific administrative findings required to support the Feldman New Residence are articulated in the County's Coastal Zoning Ordinance (CZO) Section 35-169.5. The proposed findings adopted by the Planning Commission and attached to your Board Letter are inadequate in several respects, and an analysis of the proposed findings and the record demonstrates that the findings do not support an approval, and moreover that the findings are not supported by substantial evidence in the record. Findings are essential to "bridge the analytic gap between the raw evidence and ultimate decision or order." (*Topanga*, *supra*, 11 Cal. 3d at 515). The proposed findings fail to achieve this purpose and cannot support approval of the proposed Project.

a) The Subject Property Is Not in Compliance with all Laws, Rules, and Regulations

The Coastal Zoning Ordinance allows approval of a CDP only where the subject property and development are in compliance with "all laws, rules, and regulations" (*see* Findings, p. A-6). Specifically, CZO Section 35-169.5 1.c (see also subsection 2.a), identifies the following finding required for approval of the Project CDP:

> The subject property and development on the property is **in compliance with** all laws, rules and regulations pertaining to zoning uses, subdivisions, setbacks and any other applicable provisions of this Article, and any applicable zoning violation enforcement fees and processing fees have been paid. This subsection shall not be interpreted to impose new requirements on legal nonconforming uses and structures in compliance with Division 10 (Nonconforming Structures and Uses).

(Emphasis added.)

The project parcel has been identified as the site of an illegal, unpermitted seawall that has had significant adverse impacts on coastal resources for over 3 decades. On August 27, 2015 the Coastal Commission sent a letter to the County referencing the Coastal Commission's **Violation File Number V-4-15-0055** and identifying the "Unpermitted construction of a shoreline rock revetment in

a location that impedes public coastal access" (County Memorandum, August 8, 2018, Attachment 1). That violation remains unabated and there are no approved plans or permits for its remedy. While County Staff asserts that the August 27, 2015 Coastal Commission letter is insufficient to establish that a "violation" exists on the property (*see* August 8, 2018 Memorandum), the finding (above) in fact refers to the subject property and development thereon being *in compliance* with all laws, rules, and regulations. As the Coastal Commission letter makes clear**, the unpermitted rock revetment "conducted in the Coastal Zone without a valid CDP constitutes a violation of the Coastal Act**" and because "the subject unpermitted development encroaches onto public beach area, located at and below the mean high tide line, thus preventing both public use of this area and lateral access to the coast …the unpermitted rock revetment constitutes a violation of the Coastal Act's public access provisions." (County Memorandum, August 8, 2018, Attachment 1, pp. 2-3.)

Here, it is clear that <u>there is no substantial evidence</u> to support a finding that the subject property and development on the property is in compliance with the Coastal Act, and on this basis alone the Board cannot approve the Project and must grant the appeal. Moreover, this finding is not merely an inconsequential box to check off; rather, it has real implications for the adequacy of the environmental review, and consistency with applicable CLUP policies and Coastal Act provisions in this case. As clarified in the Revell Report (pp. 1,7) "the unpermitted revetment accelerates longshore currents and sediment transport and would likely alter wave run up elevations" and "[u]ntil this unpermitted armoring issue is resolved, the site cannot be accurately modeled."

b) The Project Is Inconsistent with Applicable Policy

CZO Section 35-169.5 1.a (see also subsection 2.a) identifies the following finding required for approval of the Project CDP:

> The proposed development conforms: 1) To the applicable policies of the Comprehensive Plan, including the Coastal Land Use Plan; 2) With the applicable provisions of this Article or the project falls within the limited exceptions allowed under Section 35-161 (Nonconforming Use of Land, Buildings and Structures).

The Project would entail an approximate 740% increase in structural development on the 1.15 acre site vulnerable to coastal hazards, and significantly constrained by significant biological resources including the Carpinteria Salt Marsh and on-site jurisdictional wetland. The Project encroaches into the 100-foot wetland buffer called for in the CLUP, resulting in a host of potential impacts to wetland species (*see* Gonella Report, Attachment 2 hereto). The proposed new residence is taller, longer, and substantially more visible than the prior modest home. (*See* Board Letter Attachment 7, Visual Simulations) and the increase in structural development increases coastal hazard vulnerability[1] (*see*

[1] See Santa Barbara Area Coastal Ecosystem Vulnerability Assessment (SB CEVA Report, 2017) Available at: https://caseagrant.ucsd.edu/sites/default/files/SBA-CEVA-final-0917.pdf

Coastal Commission letter, 2/15/18, p. 1 "the proposed residence is significantly larger than the existing residence and occupies a greater lineal extent of the property that would be vulnerable to coastal hazards"), creating the reasonable possibility that a host of significant environmental impacts will result (*see* Revell and Gonella reports, Attachments 1 & 2 hereto). The new substantially larger structure also represents an over 66% increase in impermeable surfaces, exceeding the County's threshold of significance for water resource impacts by over two-fold (see section 2.c, below), and results in inconsistencies with LCP policies protecting watersheds. These and other features of the Project render it fundamentally inconsistent with numerous applicable policies protecting coastal resources including ESHA and watersheds. Specifically, the Project is inconsistent with the following applicable policies:

Policies Protecting ESHA

CLUP Policy 2-11: All development, including agriculture, adjacent to areas designated on the land use plan or resource maps as environmentally sensitive habitat areas, shall be regulated to avoid adverse impacts on habitat resources. Regulatory measures include, but are not limited to, setbacks, buffer zones, grading controls, noise reductions, maintenance of natural vegetation, and control of runoff.

CLUP Policy 9-9: A buffer strip, a minimum of 100 feet in width, shall be maintained in natural condition along the periphery of all wetlands. No permanent structures shall be permitted within the wetland or buffer area except structures of a minor nature, i.e., fences, or structures necessary to support the uses in Policy 9-10. (emphasis added).

Coastal Act Section 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

Geological Hazards Policy

CLUP Policy 3-8: Applications for grading and building permits, and applications for subdivision shall be reviewed for adjacency to, threats from, and impacts on geologic hazards arising from seismic events, tsunami runup, landslides, beach erosion, or other geologic hazards such as expansive soils and subsidence areas. In areas of known geologic hazards, a geologic report shall be required. Mitigation measures shall be required where necessary.

Policies Protecting Coastal Watersheds

Coastal Act § 30231. The biological productivity and quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of groundwater supplies and substantial interference with surface water flow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams. (emphasis added)

CLUP Hillside and Watershed Protection Policy 3-14: All development shall be designed to fit the site topography, soils, geology, hydrology, and other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. Natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible. Areas of the site which are not suited for development because of known soil, geologic, flood, erosion or other hazards shall remain in open space.

CLUP Hillside and Watershed Protection Policy 3-19: Degradation of water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage, and other harmful waste, shall not be discharged into or alongside coastal streams or wetlands either during or after construction.

CLUP Flood Hazard Area Overlay Policy 3-11: All development, including construction, excavation, and grading, except for flood control projects and non-structural agricultural uses, shall be prohibited in the floodway unless off-setting improvements in accordance with HUD regulations are provided. If the proposed development falls within the floodway fringe, development may be permitted, provided creek setback requirements are met and finish floor elevations area above the projected 100-year flood elevation, as specified in the Flood Plain Management Ordinance.

CLUP Flood Hazard Area Overlay Policy 3-12: Permitted development shall not cause or contribute to flood hazards or lead to expenditure of public funds for flood control works, i.e., dams, stream channelization, etc.

Visual Resource Protection Policies

CLUP Visual Resource Protection Policy 4-4: In areas designated as urban on the land use plan maps and in designated rural neighborhoods new structures shall be in conformance with the scale and character of the existing community. Clustered development, varied circulation patterns, and diverse housing types shall be encouraged.

> *Coastal Act § 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.*

The Project's inconsistency with these policies not only precludes the Board from making the required finding of approval, it provides substantial evidence that the Project may result in potentially significant land use impacts that trigger CEQA's EIR requirement. (*See Pocket Protectors,* 124 Cal.App.4th at 930; CEQA Guidelines, App. G, § IX (b).)

c) Additional Findings for Appealable Coastal Development

In addition to the above Findings, the Board also must find (pursuant to CZO Section 35-169.5 (2.b – 2.d):

> The development will not significantly obstruct public views from any public road or from a public recreation area to, and along the coast.
>
> The development is compatible with the established physical scale of the area.
>
> The development will comply with the public access and recreation policies of this Article and the Comprehensive Plan including the Coastal Land Use Plan.

For reasons discussed in our April 16, 2018 appeal letter and herein, the Project is excessively large and tall, rendering it incompatible with the established physical scale of the area, and affecting public views from public roads and most notably from the beach. Once coastal hazards are accurately modelled, the base floor will likely need to be elevated, further exacerbating visual impacts, and thereby necessitating a reduction in the size, bulk and height of the proposed Project. Additionally, as described in the above section, above, the unpermitted revetment fails to comply with the public access and recreation policies of the Coastal Act and CLUP, calling into question whether the overall development can be found to comply with the policies.

2) <u>CEQA Prohibits Approval of this Project with the Proposed MND</u>

"The foremost principle under CEQA is that the Legislature intended the act 'to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.'" (*The Pocket Protectors v. City of Sacramento* (2004) 124

Cal.App.4th 903, 926.) "The EIR requirement is the heart of CEQA." (Cal. Code Regs., tit. 14[2], § 15003 (a).) An EIR identifies the significant effects a Project will have on the environment, identifies alternatives to the project, and indicates the manner in which the significant effects can be mitigated or avoided. (Public Resources Code § 21002.1(a).) Its purpose is to "inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made", protecting the environment as well as informed self-government. (*Citizens for Goleta Valley v. Board of Supervisors of Santa Barbara County* (1990) 52 Cal. 3d 553, 564.) CEQA "creates a low threshold requirement for initial preparation of an EIR and reflects a preference for resolving doubts in favor of environmental review when the question is whether any such review is warranted." (*League for Protection of Oakland's Architectural and Historic Resources v. City of Oakland* (1997) 52 Cal. App. 4th 896, 904-905; Public Resources Code § 21151.)

Whether an agency abused its discretion in adopting a negative declaration is reviewed under the "fair argument" test. *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-151. Pursuant to this test, an agency is required to prepare an EIR instead of a negative declaration if the record contains substantial evidence supporting a fair argument that the project *may* have a significant effect on the environment. (*League for Protection,* 52 Cal. App. 4th at 904.) This test does not require that the evidence received by the agency affirmatively prove that significant environmental impacts *will* occur, only that there is a *reasonably possibility* that they will occur. (*Sundstrom v. County of Mendocino* (1988) 202 Cal. App. 3d 296, 309.) Moreover, "[i]f there was substantial evidence that the proposed project might have a significant environmental impact, evidence to the contrary is not sufficient to support a decision to dispense with preparation of an EIR and adopt a negative declaration." (*Sundstrom,* 202 Cal. App. 3d at 310 (quoting *Friends of "B" Street v. City of Hayward* (1980) 106 Cal.App.3d 988, 1002).)

"Substantial evidence . . . means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (CEQA Guidelines, § 15384 (a).) "Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and **expert opinion supported by facts**." (*Id.* at subd. (b) (emphasis added); Pub. Resources Code § 21080 (e)(1)-(2).) **The fact based opinions of agency staff and decisionmakers, stemming from experience in their respective fields, are considered substantial evidence for a fair argument.** (*see Pocket Protectors,* 124 Cal.App.4th at 932; *Stanislaus Audubon Society,* 33 Cal. App. 4th at 155 (probable impacts recognized by the planning department and at least one member of the planning commission, based on professional opinion and consideration of other development projects, constituted substantial evidence supporting a fair argument that the project would have significant growth inducing impacts).

Additionally, "[r]elevant personal observations of area residents on nontechnical subjects may qualify as substantial evidence for a fair argument." (*Pocket Protectors,* 124 Cal. App. 4th at 928;

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[2] This code section referred to hereafter as the "CEQA Guidelines" or "Guidelines."

Ocean View Estates, 116 Cal.App.4th at 402.) Argument, speculation, unsubstantiated opinion or narrative, and clearly inaccurate or erroneous evidence does not constitute substantial evidence. Pub. Resources Code § 21080 (e)(1)-(2). Additionally, "if substantial evidence supports a fair argument that the proposed project conflicts with policies [adopted for the purpose of avoiding or mitigating an environmental effect] this constitutes grounds for requiring an EIR." (*Pocket Protectors,* 124 Cal.App.4th at 930; CEQA Guidelines, App. G, § IX (b).) Moreover, while the absence of evidence in the record on a particular issue does not automatically give rise to a fair argument that a project may have a significant effect on the environment, an agency "should not be allowed to hide behind its own failure to gather relevant data" and "[d]eficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences." (*Sundstrom,* 202 Cal. App. 3d at 311.)

Where a court determines that there is substantial evidence in the record that the project may have a significant effect on the environment, the agency's adoption of a negative declaration must be set aside because the agency abused its discretion in failing to proceed in the manner required by law. (*League for Protection,* 52 Cal. App. 4th at 905; *Quail Botanical,* 29 Cal.App.4th at 1602.) Whether the evidence in the record supports a fair argument of significant effects is a question of law and the Court does not defer to the agency's decision. (*Sierra Club v. County of Sonoma* (1992) 6 Cal. App. 4th 1307, 1318 ("deference to the agency's determination is not appropriate and its decision not to require an EIR can be upheld only when there is no credible evidence to the contrary."))

a. Potentially Significant Impacts to Biological Resources

The Carpinteria Salt Marsh (CSM), also called El Estero in the County's CLUP, is the largest coastal wetland under County jurisdiction (approximately 230 acres). (CLUP, p. 160.) While the CLUP finds that the "Open Lands" and "Habitat Area" designations protect the Carpinteria Salt Marsh from direct threat of development, "indirect impacts such as sedimentation or toxic runoff from surrounding land uses can threaten its biological productivity." (*Id.*) Further, the 1.15 acre Project site contains a small on-site wetland that is hydrologically and biologically connected to the Carpinteria Salt Marsh and that qualifies both as a federal and state jurisdictional wetland, and, like the Carpinteria Slough, is an Environmentally Sensitive Habitat Areas (ESHA) protected by the County's Local Coastal Program (LCP) and the Coastal Act. (MND p. 12.) The MND describes Project development within the 100-foot buffer surrounding the on-site wetland, including:

> 1,409 square feet of the proposed residence, 914 square feet of the driveway [in addition to the 790 square feet of existing driveway within the area], 90 square feet of hardscape, 219 square feet of stairway, ad 100 square feet for a fire hydrant. Combined, the total permanent ground disturbance located less than 100 feet from the wetland as a result of the proposed project would be 2,732 square feet (approximately 0.062 acres.)

(Id.)

The Gonella Report identifies numerous potentially significant Project and cumulative impacts to biological resources pursuant to the County's CEQA thresholds including to the Carpinteria Salt Marsh, the on-site wetland, and sensitive and endangered species that rely on these habitats including Saltmarsh bird's-beak (*Cordylanthus maritimus* ssp. *maritimus*), a federally endangered plant (*see* Gonella Report, p. 4.; 43 Federal Register 44810 (9/28/1978).) The Gonella Report provides ample substantial evidence in the form of expert fact-based opinion, that the Project may result in significant unmitigated environmental impacts requiring evaluation in an EIR. (*See* CEQA Guidelines, § 15384 (b); *League for Protection,* 52 Cal. App. 4th at 904.)

Moreover, the Revell Report explains the link between the effects of sea level rise on the Carpinteria Salt Marsh, and potentially significant impacts of the Project as follows:

> The report on sea level rise does not consider the effect of coastal flooding coming from the Salt Marsh side, nor does it consider the impact to Environmentally Sensitive Habitats in the wetlands and beaches that could be affected by the development during the 75 year of the project. The wetlands and beaches as sea level rises will need to move up in elevation and inland, **this development, particularly the western portion will reduce the ability of the salt marsh habitats to evolve vertically**. The Santa Barbara Coastal Ecosystem Vulnerability Assessment[3] states that says that in the Carpinteria Salt Marsh transition and high marsh converts to mid marsh with only ~10 inches of SLR, affecting 14 of the 16 species of Conservation concern in Carpinteria Salt Marsh. With 5 feet of sea level rise, the marsh largely converts to open water and low mudflat habitats. Beach loss from coastal squeeze will also occur as sea level drowns beaches backed by cliffs or coastal armoring.

(Revell Report, p. 5 (emphasis added).)

In addition, the Coastal Commission, in their comments on the second draft MND provides "[t]he proposed project also raises significant concerns regarding temporary and permanent impacts to on-site wetlands." (2/15/18 Coastal Commission letter, p. 2.) "Although a Native Plan Restoration and Habitat Enhancement Plan is proposed for the project, the second draft MND should first analyze avoidance of impacts to wetland environmentally sensitive habitat areas by providing a minimum buffer of 100 feet before mitigation is considered, consistent with the requirements of Policies 2-11, 3-19, and 9-9 of the County's certified Land Use plan and Sections 30239, 30231, and 30240 of the Coastal Act." (Id., p. 3.) In addition to rendering the Project inconsistent these enumerated LCP and Coastal Act requirements, the expert fact-based opinion of Coastal Commission staff contained in the 2/15/18 letter constitutes substantial evidence supporting a fair argument that the Project may result in potentially significant impacts to biological resources including the on-site wetland. (*See Pocket Protectors,* 124 Cal.App.4th at 932 and *Stanislaus Audubon Society,* 33 Cal. App. 4th at 155

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[3] Santa Barbara Area Coastal Ecosystem Vulnerability Assessment (SB CEVA Report, 2017) Available at: https://caseagrant.ucsd.edu/sites/default/files/SBA-CEVA-final-0917.pdf

(recognizing the fact based opinions of agency staff and decisionmakers, stemming from experience in their respective fields, as substantial evidence for a fair argument).)

b. Potentially Significant Impacts to Coastal Waters

In its letter on the second draft MND, Coastal Commission staff states that "this project raises significant issues concerning coastal hazards given that, based on the information contained in the County's second draft MND, the proposed project is expected to be subject to wave action and shoreline erosion over the structures expected life." (2/15/18 Coastal Commission letter, pp. 1-2.) The Commission's letter expands on the coastal hazard issues as follows that "the proposed residence is significantly larger than the existing residence and occupies a greater lineal extent of the property that would be vulnerable to coastal hazards", that "a confluence of the worst case sea level rise projections with a 100 year storm and a 100 year wave run-up event would result in wave run-up extending above the second story of the residence to the first habitable floor of the proposed residence (after having entirely flooded the first uninhabitable story of the residence) by 3.7 inches", and that "the first uninhabitable story …designed to include break-away walls which have the potential to become marine debris should the residence be subjected to wave run-up… raises significant concerns regarding adverse impacts to coastal waters, including the Pacific Ocean and the Carpinteria marsh, from such debris." (*Id.*, p. 2.) In addition to rendering the Project inconsistent with applicable LCP and Coastal Act requirements (see above), the expert fact-based opinion of Coastal Commission staff contained in the 2/15/18 letter constitutes substantial evidence supporting a fair argument that the Project may result in potentially significant impacts to coastal waters. (*See Pocket Protectors,* 124 Cal.App.4th at 932 and *Stanislaus Audubon Society,* 33 Cal. App. 4th at 155 (recognizing the fact based opinions of agency staff and decisionmakers, stemming from experience in their respective fields, as substantial evidence for a fair argument).)

The technical report prepared by David Revell, Ph.D. of Revell Coastal identifies applicable data including new post-Thomas Fire and debris flow FEMA maps that were not considered in the MND and Wave Run up Study, and the omission of which results in the substantial understatement of coastal and fluvial hazards, and associated Project impacts. Revell concludes that "[t]he Project's unusual vulnerability to both coastal hazards and fluvial hazards creates a reasonable possibility that the Project will result in significant environmental impacts." (Revell Report, p. 2.) The Revell Report provides ample substantial evidence in the form of expert fact-based opinion, that the Project may result in significant unmitigated environmental impacts requiring evaluation in an EIR. (*See* CEQA Guidelines, § 15384 (b); *League for Protection,* 52 Cal. App. 4th at 904.)

c. Potentially Significant Impacts from Impermeable Surface Increase

The MND admits that the amount of impermeable surface added by the Project exceeds the County's thresholds:

> Existing impervious surfaces on-site total 3,044 square feet (.07 acres). The project would result in the addition of 5,990 square feet (.14 acres) of additional impervious surface, which exceeds the County significance threshold of an increase in impervious surfaces by 25% or more.

(August 2018 MND, p. 31.) While the MND does not disclose the amount of the exceedance, the Project *would increase the amount of impervious surfaces by over 66%*, or over twice the threshold of significance. The MND however concludes that no impact would result because "a Tier 1 Stormwater Control Plan (Ashley Vance Engineering, March 14, 2014) prepared for the proposed project includes provisions for runoff to be captured and directed to vegetated areas through storm drain dissipaters." (Id.) The MND does not include any evidence that this Plan will effectively mitigate the Project's water resource impacts caused by the substantial increase in impervious surfaces.

The County's CEQA Thresholds provide that "[a] significant water quality impact is presumed to occur if the project: … Increases the amount of impervious surfaces on a site by 25 percent or more". (August 2018 MND, p. 30; County Environmental Thresholds and Guidelines Manual, p. 133 (emphasis added).) The County's CEQA Thresholds further provide that "[a] significant water quality impact is presumed to occur if the project: … Results in removal or reduction of riparian vegetation or other vegetation (excluding non-native vegetation removed for restoration purposes) from the buffer zone of any streams, creek or wetlands". (Id (emphasis added).) The Thresholds only provide that "[i]mplementation of best management practices identified in the SWQMP will generally be considered to reduce the stormwater quality impact to less than significant"; preparation of a management plan does not necessarily reduce the significant water quality impacts of a project including increase in impervious surfaces and reduction of riparian vegetation in the buffer zone of the onsite wetland.

The Tier I Stormwater Control Plan prepared by Ashley & Vance indicates that of only one of four runoff reduction measures are indicated for the Project. (MND Attachment 4, p. 1) The Stormwater Control Plan includes only cursory guidance, stating "Runoff from roof drains and area drains will be collected and directed to the two storm drain dissipaters similar to the one shown; above, in order to convey the runoff in a non-erosive manner." (*Id.*, p. 2.) The Stormwater Control Plan includes no performance standards by which this mitigation measures effectiveness can be gauged as required (*see* CEQA Guidelines § 15126.4 (a)(1)(B).) Because of these deficiencies, the proposed mitigation (MM-Wat-01) is legally inadequate. This inadequate mitigation also precludes the use of an MND for this Project. (*See* California Environmental Law & Land Use Practice (Matthew Bender & Co., Inc., 2013) § 21.09 ("To succeed, [a mitigated negative declaration] requires … feasible and specific mitigation measures that are so clearly effective that no substantial evidence can be produced that the revised project may still have significant environmental effects.")

Adding substantial evidence with respect to the impacts of hardscaping on biological resources, the Gonella Report provides:

> The new permanent structures specifically hardscaping, will increase rain runoff from the site, into the on-site wetland and CSM. New and expanded landscape irrigation may have the same result, altering the sensitive hydrological systems of associated wetlands and their species, not to mention increase sedimentation, and pollutant runoff into the on-site and adjacent wetlands, likely to have a significant impact on the federally and state protected Saltmarsh bird's-beak *(Cordylanthus maritimus ssp. maritimus),* whose largest population lies within 50 feet of the construction zone. The vernal pool wetland on-site, is, by nature, an ephemeral, fragile habitat where a diverse set of species exist under very specific and temporary conditions—any change or altering of those conditions, as will occur in the proposed home expansion on 755 Sand Point Road, would very potentially significantly impact this habitat that the endangered Saltmarsh bird's-beak depends. The Endangered Species Act of 1973 (ESA; 16 U.S.C. § 1531 et seq.) precludes any such degradation of listed species habitat, and as the project proposal stands, without thorough quantification of increased runoff, sedimentation and pollution from the site, may result in the inadvertent 'take' of the Saltmarsh bird's-beak.

(Gonella Report, p. 5.)

d. Potentially Significant Impacts to Cultural Resources

The Revell Report provides that "recent models show that the Project may be subject to additional long term and storm induced coastal erosion that may further reduce its anticipated lifetime below the 75-year setback the County requires from the coast", and that "[t]his undisclosed erosion may also have the effect of exposing lower strata in the soil. (Revell Report, p. 6.) Exposure of this lower strata in turn, carries the potential to expose previously unidentified archaeological resources that may be significant and/or qualify as a Tribal Cultural Resource (TCR). As established in Ferren (1985) at page 43[4], the Project site and entire sandspit experienced considerable First People's occupation during the Late Period and thus, may contain cultural materials in lower strata. The excessive number and areal footprint of caissons supporting the Project similarly require more careful evaluation of cultural resources. Under these circumstances, an extended Phase I survey should be prepared, to verify the MND's assumption that no significant cultural resources exist within the proposed development footprint. Additionally, an extended Phase I survey is necessary to establish the environmental baseline used to determine the Project's impacts to cultural resources.

[4] Carpinteria Salt Marsh: environment, history, and botanical resources of a Southern California estuary (Ferren, 1985)
available at: https://archive.org/stream/carpinteriasaltm00ferr/carpinteriasaltm00ferr_djvu.txt (full text) and https://archive.org/details/carpinteriasaltm00ferr (original format)

3) Conclusion

Discussed above, the MND, its Mitigation Measures, and the Project Conditions of Approval are inadequate to mitigate the Project's impacts and assure conformity with applicable land use policy requirements and regulatory requirements. The Board cannot make the Findings necessary to support approval of the Project based on the evidence before you. For all these reasons we respectfully request that the Board of Supervisors approve this appeal, deny the Project, direct the preparation of an EIR and direct the Applicant to make revisions to the Project to conform to the site's numerous and substantial constraints once the revetment remediation project is completed.

Respectfully Submitted,

LAW OFFICE OF MARC CHYTILO, APC

Ana Citrin
Marc Chytilo
For Appellants Raemer Crest, LLC and Brilliant Projects, LLC

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MEMORANDUM

Date: August 24, 2018

To: Marc Chytilo

From: David Revell, PhD

Subject: Review of StreamlineWest Engineering Sea Level Rise Report for 755 Sand Point Road (Feldman New Residence)

Summary of key findings

The Streamline West Report is inadequate in the following respects:

1. Uses the US Army Corps of Engineers sea level rise curves. 1.15 feet low, 3.77 medium, and 4.8 feet high of Sea Level Rise (SLR)
2. Does not include new revised science of SLR and probabilities that project that by 2090 between 4.4 to 5.3 feet of SLR at Santa Barbara – Ocean Protection Council 2018
3. Acknowleges the new FEMA coastal flood maps uses 16' North American Vertical Datum of 1988 (NAVD) but relies on old FEMA maps using 13' NAVD
4. No actual calculation of wave run up, rather relies on a 100 year tide elevation as "wave run-up"
5. No discussion or consideration of fluvial or combined fluvial/coastal flooding from Salt Marsh side
6. No mention or consideration of tsunami risk
7. No consideration of changed flooding from debris flows which shows present day hazards flood the entire site
8. Acknowledges that flooding of access road will occur but not part of project.
9. Considers a with and without existing sea wall but doesn't address increased runup on a structure or coastal erosion.
10. No calculation of wave run up on revetment. Assumes that revetment stops all waves and overtopping and thus only uses a design tide + SLR. No Direct Integration Method or other wave run up calculationsas recommended by FEMA (2005) for use on armored backshores
11. No calculations of episodic erosion events considered in the without armoring future scenario
12. Coastal erosion treated tangentially, saying no historic trend. Erosion without seawall assumed only 2 feet lowering of beach, not a beach/ dune crest or shoreline erosion accelerated with sea level.
13. No discussion of beach loss. Existing and future loss of the beach in front of the unpermitted revetment accelerates longshore currents and sediment transport and would likely alter wave run up elevations.
14. Implications for Environmentallly Sensitive Habitat Area impacts – Santa Barbara Coastal Ecosystem Vulnerability Assessment says that transition and high marsh habitats will convert to mid marsh with ~10 inches of SLR, affecting 14 of the 16 species of Conservation concern in Carpinteria Salt Marsh. Habitat on private parcels while not mapped explicitly would need to evolve vertically in elevation. Beach loss will also occur from coastal squeeze as sea level drowns beaches backed by cliffs or coastal armoring.

ATTACHMENT 1

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Summary conclusions

The Streamline West Sea Level Rise Report is inadequate and requires revision and thorough peer review in order to provide a relatively accurate characterization of future conditions, and potential project impacts.
The inadequacies in the Report understate the significance of existing and future coastal and fluvial hazard impacts.
Additional analysis of coastal hazard impacts of the Feldman New Residence is required in order to establish that the Feldman New Residence will not result in significant environmental impacts related to coastal processes and hazards.

The Project's unusual vulnerability to both coastal hazards and fluvial hazards creates a reasonable possibility that the Project will result in significant environmental impacts.

Project Description

The project is located at 755 Sand Point Road in the Carpinteria area located within the County of Santa Barbara (APN-005-460-043). The project proposes to demolish an existing residence 1,774 square foot dwelling and garage and to redevelop the site with a new 5,995 square foot dwelling, a 5,800 lower level storage area and an attached 1,335 square foot garage. The project is proposed to have a 75 year project life to 2090. The final structure proposes a base floor elevation of 8.64 feet NAVD, and an inhabited floor elevation of 17.64 feet NAVD. The first floor is designed with breakaway walls with storage areas. See Figure 1.

Figure 1. Proposed project site between Carpinteria Salt Marsh and the Pacific Ocean (photo courtesy of California Coastal Records Project)

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Identified Issues

Consideration of FEMA and latest State guidance on sea level rise

It is important to note that FEMA does not consider sea level rise in the Flood Insurance Rate Maps (FIRMs) mapping nor did they include coastal storm erosion in the mapping of the new high velocity (VE) zones. However, the new production FEMA FIRMs have wave velocity VE zone elevations of 16' NAVD for the base floor elevations.

- County Coastal High Hazard policy = BFE (16') +2 feet = 18' + 5.3' (High SLR from OPC 2018) = 23.3 feet NAVD
- Carpinteria Salt Marsh effective FEMA map shows AE 12 feet +5.3 feet = 17.3 feet NAVD

All of these hazards affect both access to the property since Sand Point Road is ~8 feet NAVD, and should have been considered in the report and its implications analyzed in the MND. Based on the FEMA map, it is reasonable to expect that the Project site including the development footprint may be routinely inundated during high tides within the Project's 75-year lifetime.

Revised FEMA Advisory Recovery flood maps post Thomas Fire show the existing 2018 fluvial flood hazards exacerbated by sediment in the flood control channels. While it doesn't replace the current FIRMs, these advisory FEMA maps do show potential flooding of the entire parcel up to 16 feet NAVD from fluvial sources in Figures 2 and 3 below. This type of disaster should be expected to occur again in the future with higher elevations of sea level rise and increased wildfire potential that can result in increased likelihood of debris flows following fire. Figure 3 shows flood depths on the proposed development location up to 10' deep.

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Figure 2 . Air Photo view of the site with water surface elevation elevation contours (courtesy of FEMA) [1]

[1] https://fema.maps.arcgis.com/apps/webappviewer/index.html?id=85304fbd44344071aa126716894be054

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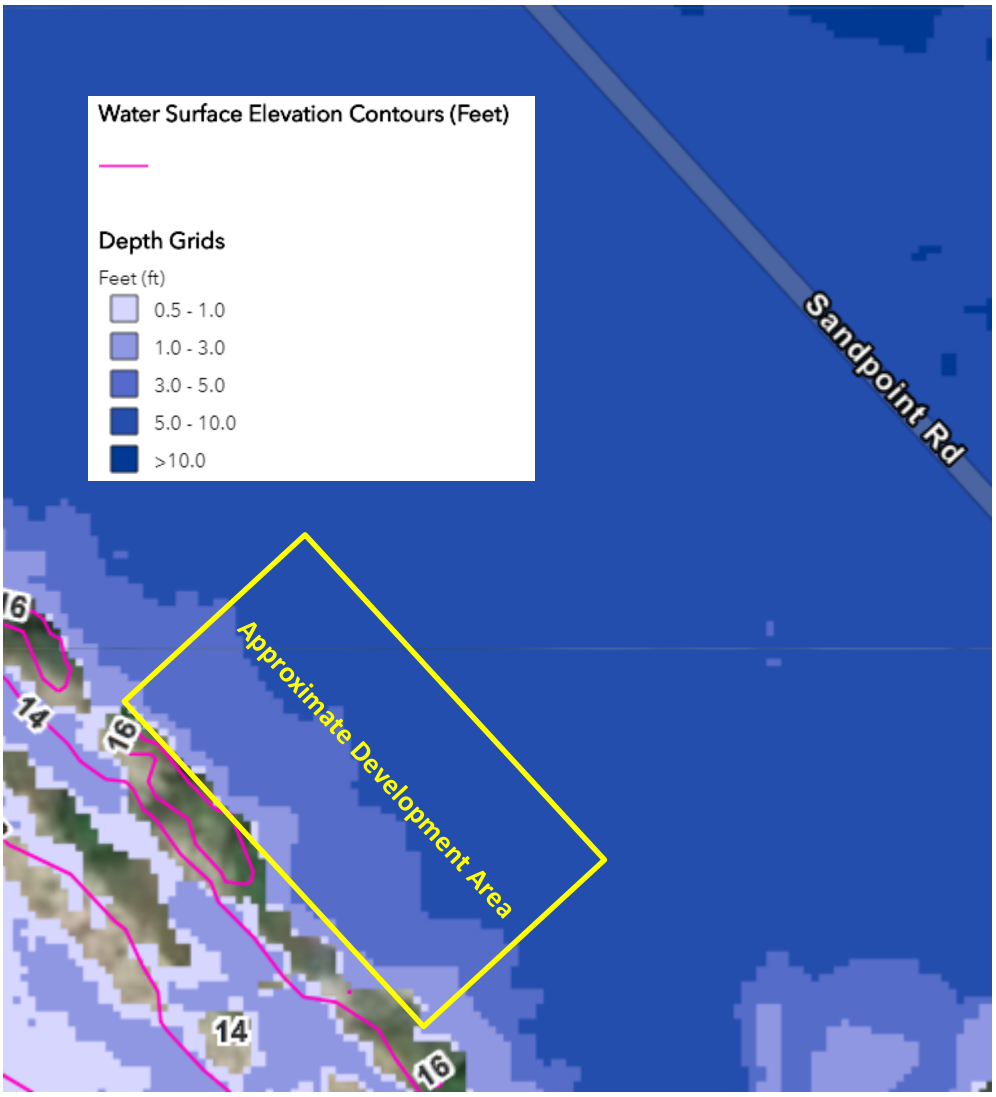

Figure 3. Advisory flood map from a 100 year fluvial flood event and existing post-Thomas debris flow conditions at the proposed development site with flood depths of up to 10' (courtesy of FEMA)[2]

The report also lacks an evaluation of flooding from Carpinteria Salt Marsh or coastal confluence of fluvial flooding occuring during a design level high tide event and sea level rise.

Lack of Coastal Erosion Analysis

The study largely ignores long term coastal erosion aside from a brief mention of the Bailard 1982 study and a statement about how the offshore Carpinteria reef stabilizes the shoreline by reducing wave energy. There are much more recent studies of both coastal erosion and beach change (Revell 2007, Revell et al 2008, Barnard et al 2009), that show that this stretch of coast has experienced long term erosion and a loss of beach largely from the construction of the existing revetments.

[2] https://fema.maps.arcgis.com/apps/webappviewer/index.html?id=85304fbd44344071aa126716894be054

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The study also does not provide any calculation of storm induced coastal erosion from a FEMA 100 year event (16 ft NAVD total water level). The report states that they are not including revetments in the design, but there are no calculations or results of potential dune erosion. The report assumes the only erosion is 2 feet reduction of the beach elevation, not actual erosion calculations as per FEMA. Coastal erosion hazard modeling was conducted as part of the County of Santa Barbara Coastal Resiliency and Vulnerability Assessment and the results are shown in Figure 4. These recent models show that the Project may be subject to additional long term and storm induced coastal erosion that may further reduce its anticipated lifetime below the 75-year setback the County requires from the coast. This undisclosed erosion may also have the effect of exposing lower strata in the soil.

Wave run up calculations

Based on the review of Streamline West Engineering report:
Wave run up calculations use Shore Protection Manual (SPM)(Saville 1958) and the Coastal Engineering Manual (CEM)(Hunt 1959) Neither of these calculations are those identified by FEMA for use in establishing regulatory floodplain and base floor elevations (2005).

- Uses 100 year design still water level of 4.9’ NGVD29 (+2.64 feet = 7.54 NAVD88)
- Extreme wave event 18.4 feet at 18 seconds (East SB channel buoy #46053)

Report assumes that there is no armoring in the wave run up calculations and thus adjusted the topography in the analysis profile. Using SPM and CEM found wave run up elevations 6.4’ (SPM – Saville 1958) and 7.87’ (CEM Hunt 1959). Used 7.9’ as conservative wave run up and combined it with the 100 year design still water 7.54. However, using the commonly applied Stockdon wave run up equation for sandy shorelines and the same assumptions, the Stockdon wave run up calculations provide a range of total water levels between 15’ and 19’ NAVD based on a range of reasonable beach slope assumptions. These calculations do not include sea level rise.

Projected run up elevations with the existing revetment assumes only a design tide elevation + sea level rise based on Santa Barbara gage, NOT wave run up on a structure as identified in the FEMA guidelines (FEMA 2005). Accordingly, the wave run-up calculations provided in the report understate the potential impacts of coastal erosion, wave flooding and sea level rise.

Potential impacts to Environmentally Sensitive Habitats - coastal wetlands and beaches

The report on sea level rise does not consider the effect of coastal flooding coming from the Salt Marsh side, which will increase the likelihood that the Project site, access road and supporting critical infrastructure could become inundated within the 75-year project life. The MND also does not consider the impact of coastal flooding on the Salt Marsh side to Environmentally Sensitive Habitats in the wetlands and beaches that will likely be affected by the development during the 75 year life of the project. As sea level rises, the wetlands and beaches will need to trangress (move up in elevation and inland) (Myers et al 2017, Rosecranz et al 2018).This development, particularly the western portion, will reduce the ability of the salt marsh habitats to trangress and evolve leading to an impact to ESHA. The Santa Barbara Coastal Ecosystem Vulnerability Assessment states that says that in the Carpinteria Salt Marsh transition and high marsh converts to mid marsh with only ~10 inches of SLR, affecting 14 of the 16 species of Conservation concern in Carpinteria Salt Marsh (Myers et al 2017). With 5 feet of sea level rise, the marsh largely converts to open water and low mudflat habitats. Beach loss from coastal squeeze will also occur as sea level drowns beaches backed by cliffs or coastal armoring (Myers et al 2017).

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Future coastal armoring management scenarios and affects on beaches and lateral access

I understand that one of the revetments is unpermitted and is under consideration for removal or amendment. Different solutions to this will alter the beach environment, coastal processes and coastal hazard exposures along this stretch of coast in different ways. Until this unpermitted armoring issue is resolved, the site cannot be accurately modeled. Information in Appendix D Site topography does not state a vertical datum, nor does it have the date of the survey, particularly of the beach and beach profile. In the appendix, the width of the beach is labeled, but it is unclear is being measured in these reported widths. Crest of seawalls vary from 12.5 to 14 feet (datum unknown).

To demonstrate the significance of the rock revetments to understanding how the site will appear and respond to coastal hazards and sea level rise in the future, I have summarily reviewed the three possible scenarios for addressing the unpermitted revetment and briefly described the likely impacts:

Both revetments remain
In this future scenario, the coastal armoring would reduce some of the wave run up and halt coastal erosion as long as the armoring structure was maintained. However beach and lateral access would continue to be impacted and ultimately disappear completely increasing the frequency and elevation of wave overtopping and increasing the cost of maintaining the armoring structure.

Revetments are moved to the 1964 alignment and reengineered
In this future scenario, the coastal armoring would be set back and the footprint would be consolidated which would initially provide more beach and lateral beach access. The coastal armoring would reduce some of the wave run up and halt coastal erosion as long as the armoring structure was maintained. However as sea levels rise, the lateral access would eventually be lost and the beach ultimately disappear. The disappearance of the beach would increase the frequency and elevation of wave overtopping and increase the cost of maintaining the armoring structure.

Revetments are both removed
In this future scenario, both of the revetments would be removed and the coastal processes would operate unrestricted. Historically this site had an active dune system, which could potentially be restored to provide some natural protection to the development. Over time however, shoreline and storm induced erosion would likely encroach on the properties and damage the structures. Increased setbacks and a reduced development footprint could help allow restoration of a naturally protective active dune system, and should be considered as a potential mitigation measure.

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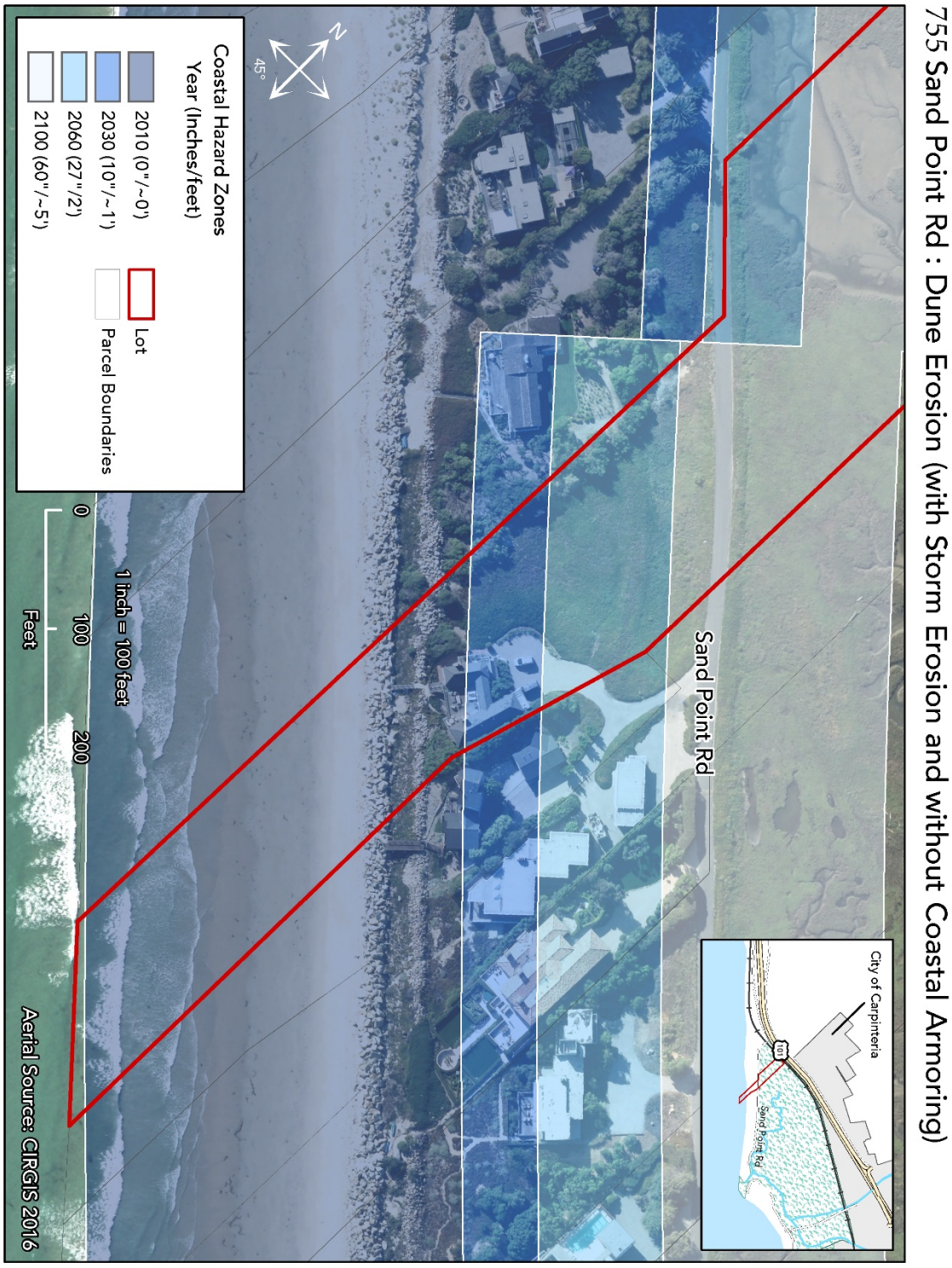

Figure 4. Coastal erosion hazard projection with sea level rise and a 100 year wave event and no armoring
http://maps.coastalresilience.org/california

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References Reviewed

Bailard, J., and S.A. Jenkins. 1982. City of Carpinteria Beach Erosion and Pier Study. Report to the City of Carpinteria. Bailard/Jenkins Consultants. April 1982. 292 pp.

Barnard, P.L., D.L. Revell, J. Eshleman, and N. Mustain. 2007. Carpinteria Coastal Processes Study: 2005-2007. USGS Open File Report 2007 –1412. 162pgs.

California Coastal Commission 2015. Sea Level Rise Policy Guidance. Available online: http://documents.coastal.ca.gov/assets/slr/guidance/August2015/0_Full_Adopted_Sea_Level_Rise_Policy_Guidance.pdf.

California Coastal Commission. August 27, 2015 letter to Sandyland Protective Association and Tom Fayram regarding enforcement for violation V-4-15-0055.

County of Santa Barbara. August 14, 2018 Final Mitigated Negative Declaration for the Feldman New Residence (15NGD-00000-00006).

Federal Emergency Management Authority (FEMA). 2005. Final Draft Guidelines for Coastal Flood Hazard Analysis and Mapping for the Pacific Coast of the United States. Oakland, CA. Prepared for the U.S. Department of Homeland Security. Available online: http://www.fema.gov/media-library-data/840f98e4cb236997e2bc6771f04c9dcb/Final+Draft+Guidelines+for+Coastal+Flood+Hazard+Analysis+and+Mapping+for+the+Pacific+Coast+of+the+United+States.pdf.

Griggs, G, J. Árvai, D. Cayan, R. DeConto, J. Fox, H.A. Fricker, R.E. Kopp, C. Tebaldi, and E.A. Whiteman (California Ocean Protection Council Science Advisory Team Working Group). 2017. Rising Seas in California: An Update on Sea-Level Rise Science. California Ocean Science Trust, April 2017.

Ocean Protection Council 2018. State of California Sea Level Rise Guidance, 2018 Update

Myers, M. R., Cayan, D. R., Iacobellis, S. F., Melack, J. M., Beighley, R. E., Barnard, P. L., Dugan, J. E. and Page, H. M., 2017. Santa Barbara Area Coastal Ecosystem Vulnerability Assessment. CASG-17-009.

Revell, D.L. 2007. Long Term and Storm Event Changes in the Santa Barbara Sandshed. PhD Dissertation. Earth Science Department, University of California, Santa Cruz. March. 148 pp.

Revell, D.L., P. Barnard, and N. Mustain. 2008. Influence of Harbor Construction on Downcoast Morphological Evolution: Santa Barbara, California. Published in Coastal Disasters '08 Conference, April 2008 North Shore, HI.

Rosencranz JA, Thorne KM, Buffington KJ, et al. 2018 Sea-level rise, habitat loss, and potential extirpation of a salt marsh specialist bird in urbanized landscapes. Ecological Evolution. 2018; 00:1–11. https://onlinelibrary.wiley.com/doi/epdf/10.1002/ece3.4196

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StreamlineWest Engineering. Sea Level Rise and Wave Run-Up Analysis for the Feldman Rebuild at 755 Sand Point Road. Stamped complete 12/31/2017.

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DAVID L. REVELL, Ph.D. | Principal / Chief Coastal Scientist

SUMMARY

Dr. David Revell is a coastal geomorphologist with 20+ years of experience studying marine, coastal and estuarine processes, in particular in the science and management of coastal processes and climate change. He has served as a technical advisor to multiple, state, federal and local jurisdictions related to ocean and coastal management especially at the intersection of how physical processes and human alterations affect hazards, habitats, and human use. He has been involved in a wide variety of contentious community stakeholder processes ranging from evaluating erosion hazard alternatives to climate change vulnerability impacts to lagoon and fisheries management, water quality, and marine spatial planning. Much of his work involves physical process research, and GIS to facilitate communication of science to inform decision making. Dr. Revell has been active in many ground-breaking climate change projects including the technical hazards work for the Pacific Institute, The Nature Conservancy's Coastal Resilience projects, and collaborative work looking at adaptation economics. Dr. Revell currently advises multiple local jurisdictions on climate change, beach, dune and coastal sediment management, lagoon processes, inlet management, and local coastal program updates.

EDUCATION

PH.D., EARTH SCIENCES

University of California, Santa Cruz, CA (2007)

M.S., MARINE RESOURCE MANAGEMENT

Oregon State University, Corvallis, OR (2000)

B.A.S, GEOGRAPHY AND ENVIRONMENTAL STUDIES

University of California, Santa Barbara, CA (1998 & 1996)

SELECT WORK HISTORY

PRINCIPAL AND CHIEF SCIENTIST, REVELL COASTAL, LLC (July 2014 – present)

Founded company to provide scientific and technical consulting services to coastal management agencies, local jurisdictions and non-profit organizations. Communicates the best available science to inform better coastal management decisions. Specific project work includes climate change vulnerability and adaptation planning, regional sediment management, and coastal lagoon management and restoration.

SENIOR COASTAL GEOMORPHOLOGIST, ENVIRONMENTAL SCIENCE ASSOCIATES (FORMERLY PHILIP WILLIAMS & ASSOCIATES) (Jan. 2008 –July 2014)

Managed projects and lead technical modeling and analyses on projects related to climate change, coastal lagoons, coastal restoration, sea level rise vulnerabilities, adaptation planning and coastal regional sediment management.

ADJUNCT PROFESSOR, MONTEREY INSTITUTE OF INTERNATIONAL STUDIES (Aug. 2013 – May 2014)

Co-instructed graduate level courses on International Marine Science and Policy and Sustainable Coastal Management. Assisted with framing the strategic planning for the Center for the Blue Economy with specific emphasis on climate change opportunities.

PROJECT SCIENTIST, MARINE SCIENCE INSTITUTE, UC SANTA BARBARA (June 2009 – Present)

Coastal research scientist collaborating on a Sea Grant investigation of changes to the sandy beach ecosystems in Southern California. Responsible for physical process field data collection, evaluation of historic trends in shoreline and sand volume changes to integrate with ecological changes. Managed graduate student researcher summer 2009 and 2010.

COASTAL SCIENTIST, COASTALCOMS, COASTAL WATCH USA (Jan. 2008 – May 2012)

International business development of coastal monitoring systems for integrated coastal observation. Identification and development of coastal management data products. Applications of video imagery to nearshore processes, coastal engineering, and marine protected areas with an emphasis on integrating ocean and coastal observations. Focus on coastal processes, ports and harbors, socio-economic data collection. Supported USGS data collection for projects in TRNERR, Goleta Beach, and Surfers' Point.

POSTDOCTORAL RESEARCHER, INSTITUTE OF MARINE SCIENCES, UCSC (Apr. 2007 – Apr. 2008)

Researched historic shoreline changes along Santa Barbara and Ventura County coasts using a variety of GIS, remote sensing and field collection techniques. Collaborated with USGS, USACE, and BEACON to assess coastal hazards and model sediment transport along the Santa Barbara coast.

MARINE AND COASTAL PROCESSES CONSULTANT, SURF 2 SEA CONSULTING (Aug. 2002 – Dec. 2007)

Sole proprietor consultancy. Worked with Ecoshore International to develop a beach and groundwater monitoring plan for a passive beach dewatering system in Hillsboro, FL (2007). Worked with Moffat and Nichols on Coastal Processes Section of Goleta Beach Environmental Impact Report (2006). Collaborated with PWA on shoreline changes to Goleta Beach County Park, and helped identify alternative solutions to park protection (2004-05). Worked for oceanfront property owners to assess coastal erosion alternatives and processes affecting property boundaries (2005). Created GIS and planning databases for the City of Bandon, Oregon (2000-03). Inventoried whale watch operators and developed best practice guidelines (2002). Coordinated GIS for the Port Orford Ocean Resources Team, a community group that interviewed local fishermen and recreational users on marine spatial planning (2002-03).

COASTAL MANAGEMENT FELLOWSHIP, NOAA (Aug. 2000 – Aug. 2002)

Received a NOAA Fellowship working as a technical advisor to the Oregon Coastal Management Program on littoral cell management planning. Developed coastal hazard GIS inventories for five jurisdictions in Oregon. Conducted a coastal hazard assessment for the Bandon Littoral cell. Worked on the Oregon Coastal Atlas project as a member of the Project Development Team, collecting and consolidating pertinent GIS and database information for ocean areas, rocky shores, sandy shores, and estuaries, to facilitate marine spatial planning.

GRADUATE RESEARCH ASSISTANT, OREGON STATE UNIVERSITY (July 1998 – July 2000)

Constructed the Netarts Littoral Cell Coastal Hazard GIS inventory for Oregon Sea Grant, Oregon Parks and Recreation Department, Oregon Coastal Management Program, and Tillamook County. This involved survey fieldwork, data processing, GIS, and project management. Facilitated stakeholder workshops to educate, and receive feedback on GIS design and hazard avoidance strategies. Recommended mitigation alternatives to State Parks regarding the Cape Lookout Dune Restoration Project - Section 227 – Army Corp of Engineers.

SELECT PUBLICATIONS

King, P., J. Gilliam, J. Calil, **D. L. Revell**. (in review) Economic tradeoffs between adaptation strategies: A case study from Imperial Beach, California submitted to Journal of Ocean and Coastal Economics, November 2016.

Garner, K.L., Chang, M.Y., Fulda, M.t., Berlin, J.A., Freed, R.E., Soo-Hoo, M.M., **Revell, D.L**., Ikegami, M, Flint, L.E., Flint, A.L., Kendall, B.L. 2015 (2015). Impacts of sea level rise and climate change on coastal plant species: a case study in the central California coast. PeerJ Prints published online.

Weaver, C.P., C. Brown, J.A. Hall, R. Lempert, **D. L. Revell**, D. Sarewitz, and J. Shukla, 2013. Climate Modeling Needs for Supporting Robust Decision Frameworks. WIRE's Climate Change

Revell, D.L., R.Battalio, B. Spear, P. Ruggiero, and J. Vandever, 2011. A Methodology for Predicting Future Coastal Hazards due to Sea-Level Rise on the California Coast. Climatic Change 109:S251-S276. DOI 10.1007/s10584-011-0315-2.

Orme, A.R., Griggs, G.B., **Revell, D.L**., Zoulas, J.G., Chenault, C., Koo, H. 2011. Beach changes along the southern California coast during the twentieth century: A comparison of natural and human forcing factors. Shore and Beach

Revell, D.L., Dugan, J.E., and Hubbard, D.M. 2011. Physical and ecological responses of sandy beaches to the 1997-98 ENSO. Journal of Coastal Research. 27(4)718-730

Barnard, P.L., **Revell, D.L**., Hoover, D., Warrick, J., Brocatus, J., Draut, A.E., Dartnell, P., Elias, E., Mustain, N., Hart, P.E., and Ryan, H.F., 2009, Coastal processes study of Santa Barbara and Ventura Counties, CA: U.S. Geological Survey Open-File Report 2009-1029, http://pubs.usgs.gov/of/2009/1029/

Revell, D.L., Barnard, P. and Mustain, N. 2008. Influence of Harbor Construction on Downcoast Morphological Evolution: Santa Barbara, California. Published in Coastal Disasters '08 Conference, April 2008 North Shore, HI.

Dugan, J.E., Hubbard, D.M., Rodil, I., and **Revell, D.L.** 2008. Ecological Effects of Coastal Armoring on Sandy Beaches. Marine Ecology.

Revell, D.L., Marra, J.J., and Griggs, G.B. 2007. Sandshed Management. Special issue of Journal of Coastal Research - Proceedings from International Coastal Symposium 2007, Gold Coast, Australia.

Revell, D. L and Griggs, G.B. 2006. Beach Width and Climate Oscillations along Isla Vista, Santa Barbara, California. Shore and Beach. 74(3)8-16.

Revell, D.L., Komar, P.D., Sallenger, A.H. Fall 2002. An Application of LIDAR to Analyses of El Niño Erosion in the Netarts Littoral Cell, Oregon. Journal of Coastal Research, ACEC Vol. 18 4:702-801.

23 August 2018

County of Santa Barbara
Planning Commission
123 E. Anapamu Street
Santa Barbara, CA 93101

RE: Biological Resource Impact Analysis and Mitigation; Feldman New Residence Mitigated Negative Declaration (MND)

FROM: Michael P. Gonella, Ph.D.
Biological Consulting
698 Circle Drive
Santa Barbara, CA 93108

Overview

Potential significant impacts to the protected biological resources associated with the proposed new residence at 755 Sand Point Road, Carpinteria (CEQA Guidelines § 15382, Environmental Thresholds and Guidelines § 6) are probable, should the Project be approved with the inadequate of Mitigated Negative Declaration (MND) (January 16, 2018, revised August 14, 2018). Expected impacts to the environment caused by the Feldman proposal, including to the on-site wetland and the directly adjacent Carpinteria Salt Marsh (CSM), during and after construction activities may be significant, in my expert opinion, due to the fragile nature of associated biological resources and the unique and sensitive conditions of the site in which those resources exist. The fact that this residence is situated in a dune-wetland ecosystem that has been historically disturbed by humans for over a century, is in a location that is threatened by impending sea-level rise, has environmentally sensitive habitat (ESH) that is highly fragmented and functionally impaired, is adjacent and connected to wetlands that were recently overwhelmed with sediment and debris flow as a result of the Thomas Fire and following rains, and contains and rare plants, animals species and protected habitats (the on-site environmentally sensitive habitat area (ESHA)), combine to significantly compromise the resilience of the on-site and adjacent wetlands, and amplify the potential significant impacts of proposed activities. Because of the numerous, potential significant impacts enumerated below, there is a clear need for further study of the structural expansion at 755 Sand Point Road. An Environmental Impact Report (EIR) is required, which includes an in-depth analysis of biological resource impacts, less impactful alternatives to the plan, and more detailed and effective mitigation measures.

Potential Significant Impacts to On-Site Wetland

"Projects which result in a net loss of important wetland area or wetland habitat value, either through direct or indirect impacts to wetland vegetation, degradation of water quality, or would threaten the continuity of wetland-dependent animal or plant species are considered to have a potentially significant effect on the environment" (California Environmental Quality Act: Guidelines, Appendix G; items c, d, and t; Santa Barbara County Thresholds and Guidelines Manual, 2008).

1. Significant Impacts from temporary activities and permanent new structures wetlands:
   As the project is proposed, there exists a real and likely potential for significant disturbance to the 0.18 acre of wetland habitat on-site at 755 Sand Point Road. This wetland qualifies as both a federal and state jurisdictional wetland due to the seasonally high moisture content and presence of hydrophytic vegetation *(Salicornia depressa* and *Distichlis spicata)* and is considered an ESHA

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(Environmentally Sensitive Habitat). Both designations preclude any activities that may disturb the species that depend on those ecological conditions and do not make exceptions for any properties, even if they are adjacent to the CSM. Although the County's Coastal Zoning Ordinance (2018) allows reduction in the 100 foot buffer for homeowners directly adjacent to the CSM, including the homeowners at 755 Sand Point Road, proposed construction and permanent activities within this buffer still create an disturbance to the ecology of the wetland that may lead to significant negative impacts to native plant and animal species on-site, as well as the adjacent salt marsh ecosystem. The 100 foot buffer serves to safeguard the wetland habitats, in part, by preventing disturbance to the soil hydrology that maintains the wetland. Hydric soils, underlying wetland vegetation, encompass an area extending beyond the perimeter of aboveground wetland vegetation. In other words, the 'watershed' and soils that maintain the Feldman's on-site wetland encompass an area significantly and measurably larger that the aboveground, visible portion of the wetland (the vegetation). Thus, the outline of the water-capture footprint of the vernal pool must be maintained to preserve the wetland in its present condition, and avoid significant reduction of its size. The buffer is the best estimate and attempt at conservation of that water-capture 'footprint', where the actual hydrological, geological and underground biological footprint (microbes of the wetland soils and extensive root systems of wetland plants) of the wetland extends to. As stated in the Carpinteria General Plan (2003): "The upland limit of a wetland is defined as the boundary between soil that is predominantly hydric and soil that is predominantly non-hydric" which extends far beyond the aboveground wetland vegetation, up through the capillary fringe. Thus, any encroachment of the ecological buffer zone, well-approximated by the 100-foot buffer regulation for most private residences, compromises the integrity of the wetland. Without a full edaphic, hydrological, vegetational and geological analysis of the on-site wetland, synthesized with climate and weather data that estimate average and extreme precipitation events that contribute to the unique wetland hydrology on-site, there is no is way to gauge the significance of the impacts that may occur to guarantee no significant impacts to the wetland. The MND does not include these factors in assessing potential impacts to the on-site wetland from the proposed project, and thus seriously underestimates potential and significant impacts.

2. <u>Proposed new structures adjacent to the wetland and its buffer threaten wetland's integrity:</u> The new permanent structures proposed (additional impact size: 1409 SF comprised of 914 SF of driveway, 90 SF of hardscaping, 219 SF of stairway and 100 SF for a new fire hydrant), specifically hardscaping, will increase rain runoff from the site, into the on-site wetland and CSM. New and expanded landscape irrigation may have the same result, altering the sensitive hydrological systems of associated wetlands and their species, not to mention increase sedimentation, and pollutant runoff into the on-site and adjacent wetlands.
3. <u>Proposed exemption from 100-foot buffer is in conflict with local environmental plans and CEQA</u>: *CEQA Appendix G (and* Santa Barbara County Environmental Thresholds and Guidelines Manual, § 6.B.1(a), 2008) *states that a project will normally have a significant effect on the environmental if it will: (a) Conflict with adopted environmental plans and goals of the community where it is located.* Although the Feldman's project claims exemption from the 100-foot buffer under the CZO, CLUP Policy 9-9 provides "A buffer strip, a minimum of 100 feet in width, shall be maintained in natural condition along the periphery of all wetlands. No permanent structures shall be permitted within the wetland or buffer area except structures of a minor nature, i.e., fences, or structures necessary to support the uses in Policy 9-10." Mirroring this language, the City of Carpinteria General Plan (2003) calls for maintenance of such a minimum 100-foot setback/buffer strip from all wetland, within which "*No structures other than those required to support light recreational, scientific and educational uses shall be permitted within the setback, where such structures are consistent with all*

other wetland development policies and where all feasible measures have been taken to prevent adverse impacts. The minimum setback may be adjusted upward to account for site-specific conditions affecting avoidance of adverse impacts" (City of Carpinteria General Plan, 2003). The Project, which includes a significant encroachment into the 100-foot buffer, is inconsistent with these policies and results in potentially significant impacts under the above County threshold.

Duration of Project Impacts Inadequately Addressed

Factors to include in assessing the significance of project impacts on biological resources include: size of impact, type of impact, and timing, including duration (Santa Barbara County Environmental Thresholds and Guidelines Manual, § 6.C.3.c, 2008).

"Assessment of impacts must account for both short-term and long-term impacts" (Santa Barbara County Environmental Thresholds and Guidelines Manual, § 6.C.3, 2008

1. Inadequate analysis of duration of impacts from temporary activities near wetlands: Construction activities commonly involve above average noise, sediment translocation, pollutant runoff, soil compaction and heavy machinery staging and these are addressed in Mitigation Measure 3-6 and MM Noise-02. However, nowhere in the MND or project plans is the construction duration defined or even approximated. The County of Santa Barbara's Environmental Thresholds and Guidelines Manual (6.C.3.c.3) lists *timing and duration* as one of the factors required assessing significance of impacts, yet this is left unaddressed. Considering a home expansion of this scale, from 1774 square feet to 6040 square feet, an increase of over 200%, the project activities will continue for at least one calendar year. It is essential to consider the impact of construction activities in light of their duration to adequately assess impacts. Prolonged temporary construction activities may significantly impact plant and animal life cycles, affects to vulnerable stages in wildlife life-cycles, progeny dispersal patterns, and population resilience due to disturbances. For example, repeated movement and staging of heavy vehicles delivering materials to the site may be insignificant for a few days or weeks, but if the project is delayed these impacts could become significant. There is no contingency plan for protection of biological resources during protracted duration of this project. Especially in light of the fact that almost no construction projects are able to adhere to a strict calendar schedule of activities due to contingencies with their workforce, weather, and materials availabilities. To insure that no significant impacts will occur to the existing ESHA wetland and the on-site wetland, a clear calendar of all project construction activities would be needed, addressing exact dates of each phase of construction, the magnitude of that activity regarding the sensitive biological resources on site and adjacent to the construction zone (including all temporary activities: staging areas for equipment, vehicles and materials) and each of these would need to be addressed in light of the life-cycles of the sensitive species involved including the two endangered species extant in the Carp Salt Marsh and the species of concern that exist with the marsh and the on-site wetland.

Significant Impacts to Federally Endangered Species

Substantially reduce species diversity or abundance (Santa Barbara County Environmental Thresholds and Guidelines Manual, § 6.C.3.a.(1), 2008).

Substantially limit reproductive capacity through losses of individuals or habitat (Santa Barbara County Environmental Thresholds and Guidelines Manual, § 6.C.3.a.(3), 2008).

1. Potential negative impacts from proposed activities directly adjacent to the Saltmarsh bird's-beak: Saltmarsh bird's-beak (*Cordylanthus maritimus* ssp. *maritimus*) is a federally endangered plant occurring only in the CSM within Santa Barbara County and related

watershed (only one record of its existence is outside the CSM, within the Franklin Creek watershed which feeds into the estuary). This protected species is already limited in distribution in California, highly restricted in distribution in Santa Barbara County, and limited to areas within the marsh possessing a narrow range of edaphic conditions—the largest and healthiest populations of this species exists with the CSM, directly adjacent to the 755 and 711 Sand Point Road. This is an annual, so exact population boundaries and densities vary from year to year, however the best data available (http://carpinteria.ucnrs.org/images/endangered-plants.jpg) indicate that individuals of the Sand Point Road population come within approximately 50 feet of the road itself, making it highly vulnerable to any ground disturbance on Sand Point Road near the proposed projects. Due to the limited space for construction vehicles on site, it is inevitable that trucks and equipment will use the berm of Sand Point Road that faces the estuary, as they have in other construction projects along this road, and such use of the berm could significantly affect these endangered plant population by causing sloughing of berm onto the populations themselves, increased dust which could affect plant vigor, pollination and seed set, (Zia-Kahn et al. 2015, Sett 2017). Dust has been shown to reduce chlorophyll production in plant leaves, cause stomatal clogging and reduce leaf protein and starch content. These may be tolerable effects in large, multi-locale plant populations with diverse intra-population genetics, but for a highly restricted, ecologically isolated species such as the Saltmarsh bird's-beak, dust from construction activities could result in significant reduction of population fecundity, requiring further interventions to improve its status as an endangered species. In addition to dust, it is likely that some soil will be inadvertently pushed down the berm. During a recent construction project on Sand Point Road, where construction vehicles repeatedly parked on the sloped berm that sit directly adjacent to the CSM and Saltmarsh bird's-beak population, the damaged berm was not reestablished and the CSM edge was damaged from repeated parking—this could lead to direct burying of the Saltmarsh bird's-beak, or direct alteration of the soil levels around the fragile root zones.

2. Potential negative impacts from routine construction activities not discussed in MND: The Saltmarsh bird's-beak is a parasitic plant, using a variety of plants as its host, and grows mostly in higher areas of the marsh, above the mean high tide line that contain areas of freshwater. The proposed project construction activities pose a significant threat to this fragile micro-habitat requirements of this endangered species: any additional runoff of water into the salt marsh, which is likely from the proposed construction activities (washing of equipment, application of water to reduce dust) and remodel proposed (additional impact size: 1409 SF comprised of 914 SF of driveway, 90 SF of hardscaping, 219 SF of stairway and 100 SF for a new fire hydrant), poses a direct and significant threat to the narrow hydrological conditions that support the adjacent Saltmarsh bird's-beak population. Similarly, any type of dumping, inadvertent sloughing of the berm including increased erosion and sedimentation from increased use of Sand Point Road during construction, could block the estuary channels and cause saltwater intrusion into the freshwater 'islands' on which the Saltmarsh bird's-beak takes refuge. The MND discusses cease of construction during a rain event, to reduce runoff and erosion, but also mentions spraying water for dust control, which may increase runoff and erosion into the on-site and nearby wetlands.
3. Potential negative impacts to wildlife reproductive cycles not addressed: The MND does not thoroughly detail the construction activities timeline (which almost any contractor will provide upon request) thus preventing any plan for working around the vulnerable flowering and seed-set times for the Saltmarsh bird's-beak. Without a plan to avoid any negative

impacts that could disrupt the life-cycle of this endangered species, there may be significant negative impacts to the population that is directly adjacent to the proposed project. This population is one of healthiest populations of this species, and thus constitutes a stronghold in the meta-population (all the populations put together), making it more vulnerable and impacts more significant, if they occur.

4. Lack of strategy to protect Belding's savannah sparrow during construction in MND: The state-endangered bird, the Belding's savannah sparrow (*Passerculus sandwichensis* ssp. *beldingi*) forages and breeds in the CSM, and is subject to changes and disturbances to that habitat. Its breeding season is approximately April through August, during which time it activities would be potentially interrupted by any heavy construction activities, including grading, concrete pouring, framing, and other loud equipment and activities. In addition, additional lights brought into the area, in the proposed new residence, could disrupt its diurnal cycles, essential for successful nesting and rearing of young. No mention of this species is included in the MND, and although construction activities and the new residence will not disrupt any known nesting sites, they will potentially disrupt foraging, breeding and new nest site selection, further weakening the sustainability of this rare bird species.
5. Increase in hardscaping and increased risks to rare species in CSM not addressed in MND: The new permanent structures specifically hardscaping, will increase rain runoff from the site, into the on-site wetland and CSM. New and expanded landscape irrigation may have the same result, altering the sensitive hydrological systems of associated wetlands and their species, not to mention increase sedimentation, and pollutant runoff into the on-site and adjacent wetlands, likely to have a significant impact on the federally and state protected Saltmarsh bird's-beak *(Cordylanthus maritimus ssp. maritimus),* whose largest population lies within 50 feet of the construction zone. *T*he vernal pool wetland on-site, is, by nature, an ephemeral, fragile habitat where a diverse set of species exist under very specific and temporary conditions—any change or altering of those conditions, as will occur in the proposed home expansion on 755 Sand Point Road, would very potentially significantly impact this habitat that the endangered Saltmarsh bird's-beak depends. The Endangered Species Act of 1973 (ESA; 16 U.S.C. § 1531 et seq.) precludes any such degradation of listed species habitat, and as the project proposal stands, without thorough quantification of increased runoff, sedimentation and pollution from the site, may result in the inadvertent 'take' of the Saltmarsh bird's-beak.

Unusual Conditions Heighten Chances for Significant Impacts

"Because of the high value and extremely limited extent of salt marsh habitat in the County, small areas of such habitat may be considered significant" (Santa Barbara County Environmental Thresholds and Guidelines Manual, § 6.D.1.e(5), 2008).

1. Cumulative significant impacts to CSM not described in MND: The Feldman residence is not a typical single family residence due to its location and the history of the site. The fact that there current home sits on an artificially raised 'island' within the wetland/dune habitat complex and is almost completely surrounded by water-dependent habitats and wildlife, make the site highly influential to the surrounding habitats. Any human activities involving grading of soil or subsoil, footprint expansion, temporary or long-term presence of heavy equipment, and the inevitable runoff into the existing wetland, raise the possibility for significant effects to occur during the proposed expansion. The residence also exists on a low elevation site, just a few meters in elevation above the fragile and protected CSM. The CSM itself has been compromised over time by repeated human alterations and encroachment, including the very real possibility that human-induced climate change and associated sea level

rise will dramatically affect the wetland. In hindsight, this is not a location for permanent human habitation – the wetland is fragile, fragmented, compromised, and stressed due to historic human activities. Thus, any further expansion of permanent human presence, including the expansion of the permanent footprint of the residence, is inappropriate and will constitute one more incursion which could help put this stressed environment over the ecological edge and into decline.

2. Effects from removal of unauthorized revetment/sea wall not reviewed: Revetment wall removal will increase chances for damage to existing residences on Sand Point Road, including 755, further reinforcing the fact that any residences in this area, especially any expansions of residences, are ecologically harmful, to a significant degree when all factors are considered, and counter the very regulations that serve to protect this rare wetland habitat.
3. Cumulative effects from heavy sedimentation event into wetland not addressed in MND: Sedimentation as a result of the Thomas fire and debris flows has had a large impact on the CSM, including complete filling of some of the deeper channels, once over 6 feet deep now completely filled. The County of Santa Barbara's Flood Control Office removed a large amount of sediment from the larger channels of Santa Monica and Franklin creeks, where they join but they were not able to remove debris from smaller channels including the channels that parallels Sand Point Road. Any potential for additional sedimentation to these smaller channels—possible in the proposed project—would further exacerbate the already highly accreted (raised-up creek bottoms) and alter the specific hydrology needed to maintain wetland species. There is a natural, compensatory process that occurs in wetlands and the CSM, where sedimentation, or accretion, is compensated by geological subsidence, but the recent, unusual debris flows and subsequent sedimentation events were at such a scale that subsidence can in no way compensate for such additional sediment. In other words, the hydrology of the wetland, at present and for the foreseeable future, will be highly compromised, and so will the persistence of wetland species that are dependent on a narrow range of soil conditions, especially in tidal estuaries where water salinity levels determine plant and thus animal species distributions. Any additional sediment flows, even if only temporary and small as would be expected from any major construction project like the Feldman home expansion, would constitute significant negative effects on the environment of the wetlands.
4. Cumulative historical impacts to the CSM and associated wetlands not considered in MND: The proposed project constitutes a significant impact when put into a historical context, including all the numerous and highly invasive alterations that the salt marsh has had to endure. The cumulative stress of historic human activities on this already rare southern California habitat, extensive agricultural development of the upland surround in the marsh in the 1800s which altered the watershed and increased marsh sedimentation, initial road construction on top of native sand dunes in 1929 which constrained the southwestern boundary of marsh (which would normally be a dynamic, not static, ecological edge) and movement of amphibians freely, partial channelization of Santa Monica and Franklin Creeks by 1943, realignment of Sand Point Road, moving parts of it further north into CSM circa 1954, sea wall revetment placed along coast to protect homes on Sand Point Road circa 1954, filling of wetland areas near downtown Carpinteria, more channelization within the marsh circa 1961, further channelization of Santa Monica Creek, estuary excavation and fill to do so ca. 1967, installation of berms along Franklin creek reduce tidal influence and degrade wetlands, evident ca. 1981, second sea wall installation after El Nino storms of 1983, and the Highway 101 widening project. When the proposed project is considered in light of the

historical list of impacts that have weakened the resilience of the salt marsh to recovery from such impacts, the current proposed project's potential impacts become more significant. Historically, CSM also provided habitat for anadromous fish including Steelhead Trout that once spawned in Santa Monica, but because of stream alterations can no longer reach watershed sites to spawn.

5. Cumulative impacts to wetlands across the region not considered: Since about 1850, there has been a 48% loss of California estuarine wetlands within Southern California with an even greater loss (62%) in Santa Barbara County. These estuarine wetlands are vulnerable to increasing rates of sea level rise that will likely exceed the 20thcentury observed rate, and which by some scenarios could exceed one meter or more by the end of the 21st century. The effects of climate change and the impacts of sea level rise on coastal ecosystems and infrastructure is recognized as a planning and management priority by local, state and federal agencies (Myers et al. 2017: Santa Barbara Area Coastal Ecosystem Vulnerability Assessment, Sea Grant Report).
6. Potential impacts to biological resources from sea level rise not examined: Impacts to biological resources associated with the proposed home expansion at 755 Sand Point Road need to be analyzed for their sensitivity to larger-scale climatological factors, like sea level rise and tidal inundation changes, both which are major drivers in large and small-scale patterns of plant habitat distributions in the CSM (Myers et al. 2017). Sea level rise modeling for the CSM, even at its lowest predictions (+25cm, Myers et al. 2017) results in drastic reductions of the high-marsh habitat, where soils are mostly saturated with freshwater as opposed to brackish and saline waters of the mid-marsh and low-marsh habitats. High-marsh habitat is host to a number of unique species that cannot tolerate saline soils, including the federally endangered plant, the Salt marsh bird's beak (*Cordylanthus maritimus* ssp. *maritimus*). The most conservative models run relating to effects of sea level rise at CSM result in drastic habitat losses that would affect a variety of plants and animals, including TES that depend on the wetland ecosystem as it is today. Higher sea level rise modelling indicates changes to the wetland on-site at the proposed project, in addition to drastic changes in the CSM habitats.
7. Jurisdictional fragmentation of the project site weakens wetland's resilience: Due to the complex authority of the CSM, the Sand Point Road HOA properties, and the ocean, actions to protect and preserve biological resources are cumbersome—each individual action to potentially harm the biological resources on site or improve them is hampered by this complexity and adds to the wetland's vulnerability. No one entity that controls the entire thing and it appears, from the history of the site, that the "Tragedy of the Commons" (Hardin 1968) is already happening and further likely. This makes each and every impact, even if under normal circumstances would be insignificant, significant, because there is no assurance that protection of the whole ecosystem will occur, making each individual fragments more vulnerable.

Restoration Plan is Lacks Detail to Prevent Significant Impacts

The proposed project would restore approximately 0.45 acres of non-native vegetation to native vegetation.

1. Restoration plan lacks the detail to ensure success and mitigation of negative impacts: Although the restoration plan aims to increase native plants and acreage on site, it falls short in details to ensure that those plantings will be both locally appropriate (in density, spatial patterning, richness and abundance). The value of restored native vegetation to the local ecosystem depends greatly on the details of the landscape plan. For example, coastal sage scrub or dune plant species, planted in a

landscape design whose spacing, distribution and diversity do not mimic natural reference ecosystems are not habitat restorations and do not replace the functionality of native vegetation to plant, animal and other native species. For this 'restoration' to succeed, the design much be based off a reference ecosystem and include monitoring and maintenance of the vegetation. MM-Bio-01 Restoration Plan. Monitoring 3 times a year in April, July, and October in years 1 and 2 is a good start, and annually in October 3, 4 and 5 or until native vegetation covers more than 75 percent of the restored habitat. – This needs to be much more specific: 75% native vegetation makes no mention of the diversity and distribution of native species that are needed for it to be a functional ecosystem surrogate.

2. No assurance of species diversity in restoration plan. The restoration plan provides no assurance that a diverse mixture of species will be restored on site, listing a number of native species that will be planted, but also stating that, "*Not all species will necessarily be included in the final plan".* This prevents reviewers of this document from determining the efficacy of the plan to replace the native ecosystem. As is used in all ecological restoration plans, a reference site that is both local and a sound analog to the effected ecosystem (dune-wetland complex at the CSM) needs to be located and used in the restoration plan. In addition, methods for quantifying the spatial patterning, density of plants, abundances of plants, diversity of plants, and soil characteristics are needed to be laid out in detail regarding the reference site, and built into a series of benchmarks for the restoration site. F
3. Seed and plant material sources need inclusion in restoration plan: No mention of seed sources or plant materials sources are given in the restoration plan. This precludes determination of the intensity of the impacts: local genetics are critical to success in restoration projects, as are properly propagated (on-site is ideal) nursery stock.
4. Use of glyphosate, even without spraying, is inappropriate weed removal method: Glyphosate can remain active in soil and water for up to six months, and although binds to soil, can move downstream and affect wetland species. It has been found to drift more than 1300 feet from the target plant, even on days where no wind is detectable (Henderson 2010). This herbicide is not appropriate anywhere near wetlands, vernal pools, the salt marsh or the nearby marine environment.
5. Landscape plans are not provided and are critical to ecosystem protection: Although there is a tentative list of native plants to be used in the restoration plan, there is no description of the ornamental plants to be used on the property, thus no assurance that invasive, non-native landscape plants will be avoided.

Documents Reviewed

Draft mitigated Negative Declaration, Feldman New Residence, County of Santa Barbara Planning Commission, January 16, 2018.

Board of Supervisor's Agenda Letter, August 14, 2018.

Coastal Zone Staff Report for Raemer Crest, LLC and Brilliant projects, LLC, Appeal of Feldman Residence, by the Santa Barbara County Planning Commission, March 14, 2018.

Project Plans for Sand Point Resident, 755 Sand Point Road, County of Santa Barbara Planning Commission Revision, February 15, 2018.

Conditions of Approval for Feldman Demo/Rebuild & Garage. March 2018. Includes Letters and guidance from Santa Barbara County Air Pollution Control District, Carpinteria~Summerland Fire Protection District, Santa Barbara County Public Work Department-Flood Control/Water Agency/Project Clean Water.

CSM Management Plan (http://carpinteria.ucnrs.org/setting.html).

City of Carpinteria General Plan/Local Coastal Land Use Plan & Environmental Impact Report, April 2003.

CSM Restoration Plan, The Land Trust for Santa Barbara, January 2007.
Santa Barbara Area Coastal Ecosystem Vulnerability Assessment, SBA CEVA Report, Sea Grant, 2017.
Santa Barbara County, Article II Coastal Zoning Ordinance, Santa Barbara County Comprehensive Plan, County of Santa Barbara Planning Commission, February 2018.
Environmental Resource Management Element, Santa Barbara County Comprehensive Plan, County of Santa Barbara Planning and Development, May 2009.
Land Use Element, Air Quality Supplement, Santa Barbara County Comprehensive Plan, County of Santa Barbara Planning and Development, May 2009. County of Santa Barbara Planning and

References

Calflora website.
Breland, Tor Arvid, and Hansen, Sissel. 1996. Nitrogen mineralization and microbial biomass as affected by soil compaction. Soil Biology and Biochemistry 28(4-5): 655-663.
Henderson, A. M.; Gervais, J. A.; Luukinen, B.; Buhl, K.; Stone, D. 2010. *Glyphosate General Fact Sheet*; National Pesticide Information Center, Oregon State University Extension Services. http://npic.orst.edu/factsheets/glyphogen.html.
Lowenfels, Jeff and Wayne Lewis. 2010. Teaming with Microbes. Timber Press.
Natural Resources Conservation Service, Plant Database.

Personal Qualifications

- B.S. Botany, U.C. Davis, 1985; M.S. Environmental Studies, San Jose State University, 1992.
- Ph.D. Botany, Miami University of Ohio, 2007
- Reviewed numerous EAs, EIRs, EISs as Public Lands Analyst, The Wilderness Society, 1990-91
- Implementation of Land Resource Management Plan & EIS mitigation plans, U.S.D.A. Forest Service, Big Bear Ranger District, 1992-96.
- Conducted botanical surveys in order to create numerous Environmental Assessments related to public use of Forest Service lands (Movie Sets, Off-Highway Vehicle Races, etc.), U.S.D.A. Forest Service, Big Bear Ranger District, 1992-1996.
- Conducted numerous botanical surveys and restoration plans for the Miami Tribe of Oklahoma, Miami, Oklahoma, 2002-Present.
- Conduct impact analyses reports for the Law Offices of Marc Chytilo, 2016-Present.